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Evidence-Based Practice in stuttering: Views from American and Polish clinical perspectives¹

Abstract: In this paper the authors present the underpinnings of Evidence-Based Practice (EBP) with application to stuttering. The application of intervention practices using EBP are discussed from two different countries, the United States and Poland. Advantages, Challenges and Future Directions as well as Solutions are presented. In sum, the authors conclude that both perspectives are relatively similar and going generally in the same direction.

Key Words: Evidence-Based Practice (EBP); stuttering; American/Polish speech-language pathology.

Praktyka logopedyczna w jąkanii oparta na dowodach – opinie z amerykańskiej i polskiej perspektywy klinicznej

Streszczenie: Autorki w artykule prezentują najważniejsze założenia praktyki logopedycznej opartej na dowodach (EBP) z zastosowaniem dla jąkania. Omówiono możliwości wdrażania EBP z perspektywy dwóch krajów – Stanów Zjednoczonych i Polski. Zwrócono uwagę na korzyści, wyzwania i prognozowany kierunek rozwoju tego typu praktyki, jak również zaproponowano możliwe do zastosowania rozwiązania praktyczne.

Słowa kluczowe: praktyka logopedyczna oparta na dowodach, jąkanie, logopedia amerykańska/polska.

1. Introduction

Speech-Language Pathology organizations around the world, such as the American Speech-Language-Hearing Association (ASHA), the Royal College of Speech and Language Therapists (RCSLT) or the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA), recommend Evidence-Based Practice (EBP) as a model approach in speech-language therapy, which focuses on the effectiveness of delivered treatments (Kully, Langevin 2005). EBP

1 The content of this paper became a reality following one of the third author's assignments while completing her preparation for the European Clinical Specialization in Fluency Disorders and a discussion with the two other authors of the importance of EBP implementation in the profession across nations.

is a model of service delivery where the decision-making process in clinical practice takes into account clinical experience, results of reliable scientific research as well as the specific needs of the client and the environment. In accordance with this model, speech-language therapists/pathologists (SLTs/SLPs)² should implement five steps in their practice: (1) ask the appropriate question; (2) select the best evidence; (3) appraise the evidence and determine if it can be used with the client; (4) apply the evidence and, (5) evaluate the application (Ingham 2003; Kully, Langevin 2005). The acronym *PICO* or *Population, Intervention, Comparison and Outcome* is often used to initiate the EBP process. For example, Yaruss and Pelczeski (2010) provide a step by step plan on how to utilize this process with a fifth grade girl who has a history of stuttering, a speech disorder, which is the focus of this paper. The process is framed on three parameters which are represented as a triangle where one of the side represents the External Scientific Evidence, the other side the Clinical Expertise / Expert Opinion and the third side is the Client/ /Patient/Caregivers Perspectives (ASHA 2004). Figure 1 illustrates this process.

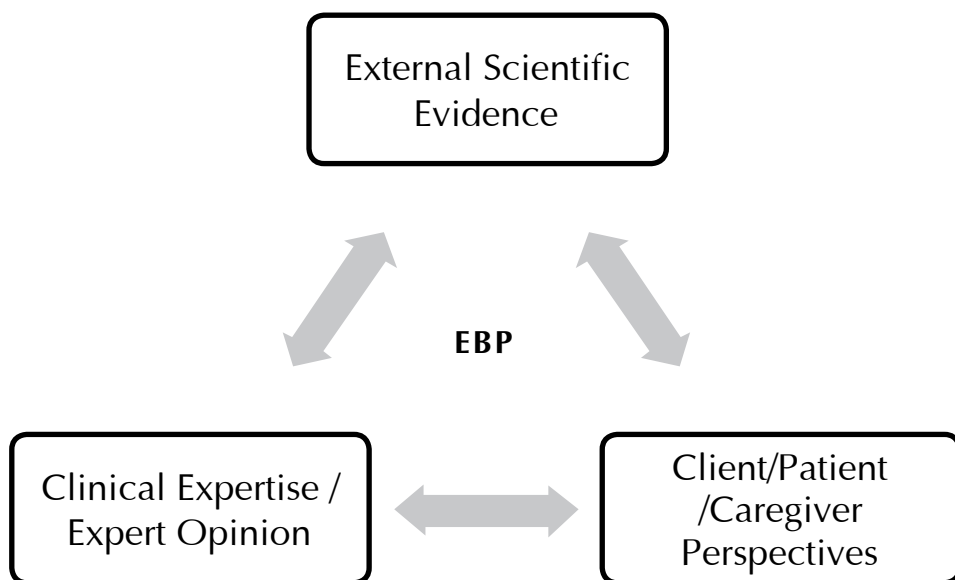


Figure 1. Representation of Three Key Elements in Evidence-Based Practice (and underneath)

Source: ASHA (2004).

The purpose of this paper is to offer the reader perspectives on EBP for treatment in stuttering, coming from two different continents and countries, the United States (U.S.) and Poland. The U.S. has been in the forefront of new trends in the profession of speech-language pathology in the creation of research and implementation of treatment plans for various speech and language disorders, and Poland is striving to provide best possible services according to European standards. Rather than just addressing research findings, the authors are reflecting on their personal experiences with the newer trend of EBP as it applies to therapies for stuttering across the Atlantic Ocean.

2 In this paper, Speech-Language Therapists or SLTs are used in the European context, whereas Speech-Language Pathologists or SLPs are used in the U.S.

2. American perspectives (United States)

EBP practices in our profession originated in the field of medicine (Sackett, Rosenberg, Gray, Haynes, Richardson 1996). The goal of this practice is to carve pathways to improve the quality of services rendered by SLTs/SLPs to their clients, thus securing more reliable and testable outcomes in the various areas of the field including stuttering.

A closer look at a historical perspective on treatment approaches in speech pathology, a relatively new recognized professional field even for the U.S. (1925), helps us understand the evolution in our clinical decisions that are largely based on general trends of a given time period. Even though the content of the paper written by Duchan (2012) is based on therapy conducted in English, it has a universal relevance. The practices used by Lionel Logue in treating Prince Albert, Duke of York, for his stuttering were very much in line with those used by his contemporaries. Indeed, therapies for stuttering of the 20th century focused on various techniques depending on the background and training of the clinicians. Clinicians who treated clients with stuttering had previous background in medicine, phonetics, elocution, or education. In essence, Logue's techniques reflected approaches that were followed by his contemporaries, but one of the greatest criticisms of his techniques were that that his diction revealed an Australian accent, which was not readily acceptable in Great Britain at the time. In conclusion, Duchan states that today's approaches to stuttering therapy and treatment are based on the fact that clinicians need to have graduated from accredited speech-language programs, use techniques that reflect evidence-based approaches and support documentation of clients' progress. And, one of the great advantages of today's practice is the increased tolerance of cultural differences. In sum, "Clinicians must have graduated from an accredited institution, must have passed a qualifying exam, and must elect to use therapy methods that are evidence based or that are justifiable through documentation. Clinicians from culturally diverse backgrounds today are often recruited by the profession because of their diversity rather than being ostracized because of their differences." (Duchan 2012: 393). Additionally, Duchan reminds us that some of the techniques used by Logue such as vociferation, arm swinging, muscle and body relaxation and diaphragmatic breathing are still used today by some clinicians. Therefore, it seems like clinicians need to be mindful of best practices, but "be allowed" to use other techniques that may be considered "obsolete" as long as they are mindful of their approaches and document their clients' progress. Advantages, challenges and future directions are discussed next.

2.1. Advantages

In general, EBP has a valuable impact on SLPs' practice in the U.S. Most SLPs report positive attitudes towards research and EBP, considering that it should be part of clinical practice and that keeping updated with current research is the responsibility of an SLP (Zipoli, Kennedy 2005). Many SLPs providing stuttering services benefit from the training of EBP, and have learned to identify clinical recommendations with appropriate justification. For example, it used to be a common practice to provide *indirect* stuttering therapy (e.g., parents speak more slowly and allow more wait time during conversation exchanges) to young children with stutter-like disfluencies, in fear that bringing the children's attention to disfluencies in direct therapy (e.g., pointing out disfluent moments, commenting and correcting disfluencies) would make disfluencies worse. Yet, there is no evidence supporting this hypothesis, and contrarily, there is evidence supporting positive results of direct therapy (e.g., the Lidcombe Program; Jones et al. 2005). Furthermore, there is no evidence suggesting that indirect therapy is better than direct therapy for treating stuttering in young children (Frymark, Venediktov, Wang 2010). Thus, many clinicians who implement

evidence-based stuttering therapy embrace both indirect and direct therapy options, and the decision is based on external scientific research, clinical expertise and client/parent preference.

2.2. Challenges

Regardless, SLPs in the U.S. encounter several challenges in implementing EBP in everyday practice. The most commonly perceived barriers to practicing EBP are time constraints and the availability of research, making scientific research the least utilized source of information in clinical decision making (Zipoli, Kennedy 2005). These barriers most likely reflect the challenges clinicians face daily in identifying *relevant* research among all the research studies published. In addition to the large amount of research in databases, published articles can be limited and/or biased for certain stuttering therapy approaches and techniques. For example, despite that both Fluency Shaping and Stuttering Modification are popular therapy approaches in the U.S., there are much more published articles on Fluency Shaping than Stuttering Modification. Based on a systematic review of stuttering treatment, articles meeting the search criteria yielded 53 articles on Fluency Shaping (prolonged speech) and only 14 on Stuttering Modification (Bothe, Davidow, Bramlett, Ingham 2006). The unbalanced number of available research articles between the two approaches might be attributable to their different goals. Fluency Shaping aims to reduce stutter frequency whereas Stuttering Modification aims to reduce struggle, fear and avoidance (Manning 2010); the outcome measure for the latter is more subjective, and potentially more difficult to generate strong evidence for publication.

Challenges of EBP remain even when external research evidence is available. The available evidence for stuttering treatment often yields inconclusive findings (i.e., no one treatment is more effective than another) (Frymark, Venediktov, Wang 2010; Herder, Howard, Nye, Vanryckeghem 2006). This could relate to the commonly accepted notion that the stuttering population is heterogeneous, with high individual variability, and that stuttering is a multifactorial disorder with various causal/contributing factors (Bloodstein, Bernstein Ratner 2008; Packman 2012), and thus, no single therapy approach would be consistently more effective and preferable over another for treating stuttering. This is particularly apparent when clinicians provide services in the metropolitan area to diverse populations (e.g., San Francisco Bay area), as clients vary tremendously, and the cultural and individual beliefs/attitudes toward stuttering play a determining role in making clinical decisions. In situations where the client's profile is unique and complex, graduate clinicians in our university clinic are often encouraged to integrate information from research across disciplines (e.g., motor learning, psychology, psychiatry and linguistics) to establish indirect evidence and exercise clinical judgment.

Another common challenge for clinicians is that detailed description of therapeutic procedures is not always available in the published research articles, especially in high-level evidence such as systematic reviews and meta-analysis. The amount of procedural detail provided in the articles varies across types of research. Single-subject research studies and case studies typically document detailed information about client background, clinical procedures and clinical progress. These types of research may provide more relevant information for therapeutic implementation than systematic review and meta-analysis, and can partially support clinical decisions (Dollaghan 2007).

2.3. Future directions

SLPs trained with the notion of EBP are often reminded to incorporate clinical expertise and client preference into the decision-making process, especially when external research

evidence is limited and/or inconclusive. Providing services without empirical evidence is not equivalent to providing *ineffective* therapy, and clinicians should not be discouraged from making clinical decisions based on clinical expertise and client preference. However, expertise and preference are often subjective, and providing clinical advice without empirical support could potentially have an adverse effect (e.g., suggesting parents to reduce the length and complexity of their utterances when talking to young children who stutter might negatively impact overall language development) (Yairi, Seery 2011). Therefore, when a clinical decision is made with limited empirical evidence, monitoring therapy progress and appraising the clinical decision becomes crucial. A valuable tool for appraising clinical practice and the impact of an “uncertain” clinical decision is to implement single-subject research design or its concepts (i.e., obtaining a stable baseline and replicating treatment effects) in therapy³.

3. Polish perspectives

Reflection about the implementation of EBP in Poland is an opportunity for professional development and should be a requirement when delivering intervention for stuttering. But, it might be difficult to carry out because of what Dollaghan describes as: “[...] anxiety over the possibility that EBP will turn out to be just one more unrealistic demand” (2004: 4). Nevertheless, it is important to maintain a positive outlook on EBP and discuss advantages, challenges, and solutions as well some recommendations in implementing this practice in Poland.

3.1. Advantages

First of all, EBP enables SLTs to feel more confident and act professionally in administering therapy. Instead of intuitive decision-making therapy carried out by trial and error, SLTs may proceed in accordance with more clearly defined procedures. Additionally, clinicians can refer to the findings of research on the treatment effectiveness to support possible outcomes. This may be a motivating factor for a client who then may feel more assurance that the approaches are not selected randomly, but have a research/theoretical foundation. Yet, we must still keep in mind that, according to ASHA’s Code of Ethics, we as professionals cannot guarantee the results of our treatment as stated in Rule J: “Individuals shall not guarantee the results of any treatment or procedure, directly or by implication; however, they may make a reasonable statement of prognosis” (ASHA 2010).

3.2. Challenges and solutions

There are many convincing arguments, that support the need to implement EBP practices (more data available, clearer defined decisions based on evidence, less need to convince the client), but it may not always be an easy process and not everything might go perfectly in line with anticipated goals. It remains important to document clients’ progress as well as take into account reports and comments from other SLTs in Poland who specialize in the area of stuttering. The first step of EBP says: *ask the right question*, e.g.: “Does intervention A work for condition B in population/setting C?” (Dennis, Abbott 2006: 13). It would seem there should not be any problems with this step, however, this question is not as simple as it first appears. Challenges occur even at this very important first step because it may be difficult to predict further difficulties once the next steps of EBP are implemented. Evaluating internationally available therapies and research, which prove their effectiveness is not an easy task because they may not always apply to clients from different backgrounds such as Poland. For example, some stuttering behaviorally-based

3 For an overview of single-subject research design and application in clinical settings, see: Dollaghan (2007), Horner, Carr, Halle, McGee, Odom, Wolery (2005), and Zhan, Ottenbacher (2001).

programs such as the Lidcombe Program in which the parents/caregivers must acknowledge the child's various stuttering episodes may be difficult for some Polish families to implement. In their views, openness about stuttering should be avoided because it is believed that talking about the fluency problem would worsen the symptoms (personal experiences of the third author).

In spite of significant changes that have occurred in the field of speech-language pathology including stuttering in the last 20 years, several barriers have prevented Polish SLTs from obtaining information about stuttering treatments used in the Western world as well as research-based results of their effectiveness. The first two roadblocks are a language barrier (most of the literature is available in English), and the second is due to economical constraints to support the clinicians' own research. The third roadblock is the dissemination of Polish SLTs' therapy outcomes that they themselves have observed in their own treatment cases. Specifically, Treatment Efficacy Research (TER) has not yet been widely distributed (Ryan 2005). Polish speech and language pathology is still in the process of "establishing its own identity as far as research related to stuttering problems (Chęciek 2007; Fibiger, Peters, Euler, Neumann 2009; Janas-Kaszczyk, Tarkowski 1991).

A second question is *how to integrate experts' opinion into the model?* Although being familiar with the research literature addressing the effectiveness of therapeutic approaches is critical, experts' opinions should also be included in one's decision making. But, ultimately are experts' opinions about treatment effectiveness more valuable than research documenting therapeutic outcomes? Rather than selecting either one of these avenues, it is important to integrate the other components of EBP, which are the clinician's experience, knowledge of the environmental conditions in which the therapy is going to be implemented, as well as the needs, beliefs and values of the specific client. Bernstein Ratner's comment, that "[...] not all treatments work for all individuals" (2005: 171) is very relevant. What ultimately counts is to be a reflective SLT and factor in the client's needs in the decision-making process. Keeping in mind Kully and Langevin's statement in this case is reassuring "[...] there will always be clients who present with unusual profiles and who bear no resemblance to the populations in group studies" (2005: 11). In addition, what the SLT brings to the therapeutic process (knowledge, skills, beliefs, and attitudes) plays a valuable role in the clinical decision-making. It is critical to be mindful that even a well-researched program such as the Lidcombe Program might have its limitations. Each individual is unique and the therapy approaches should not be based only on science, but, as we have discussed previously, the clinician's experiences and clinical judgment and this is the essence of that is discussed in an international perspective on EBP (Roddam, Skeat 2010).

3.3. Recommendations

Given the arguments presented above, applying EBP both in professional practice as well as the dissemination of this model in Poland requires taking small steps. First, all teaching faculty in the field of speech-language pathology need to acquaint themselves with the idea of EBP and it should be mandatory for faculty to teach this concept to future SLTs. In their courses and treatment plans, future and practicing SLTs should write goals and objectives for their clients that are based on research and work on activities where they document whether their approaches were effective by stating the reasons for their success or lack of success. ASHA includes a wealth of information on where to start the process by accessing its website (type in Evidence Based Practice). This information is especially important for those new students. For clinicians who have been in the field for some time, offering ongoing workshops to secure that their therapies are founded on theory supplemented by their own clinical personal experiences and clients' needs is a way to

keep up with most desired interventions. Discussions in small groups will enable all participants to benefit from experiences in working with specific case studies in the areas of not only stuttering, but also various speech and language disorders. For example, it is necessary to know the new, previously unknown approaches, try them, and check their effectiveness in everyday practice. This process will take time, determination and patience, but the third author strongly believes that there is no other way, but to slowly move forward; she tries to undertake such actions every day. In addition, students and clinicians should read publications available of which there are many now available in the Polish language by accomplished Polish-speaking academicians and clinicians and she is continually looking for effective treatments which she tries to learn and apply (Chęciek 2007; Kostecka 2004; Tarkowski, Skorek 2009; Waszczuk 2005; Węsierska, Mielewska 2012). Clinicians should be encouraged to carry out single case studies and share their outcomes with the Polish audience (Boczar 2010; Brzezińska 2011; Soboń 2008; Węsierska 2013a, 2013b). In this way, implementation of yet one more step in EBP process postulated by Schlosser and O'Neil-Pirozzi is carried out: "disseminate the findings" (2006: 5). This task is not easy – it requires humility and perseverance. In implementing any program, clinicians should take into account the clients' and their families cultural and personal preferences. However, it is not possible to disseminate this knowledge without showing that the previously unknown therapy was effective for a particular Polish-speaking client (Węsierska 2013b).

4. Conclusions

Stuttering is recognized as a disorder that may manifest itself in all races and social classes of the universe. As many as 70 million people worldwide have been identified with this disorder and the International Stuttering Association (ISA) (2010) has published a bill of rights for this population.

EBP, which originated in the field of medicine has also been applied in various areas of speech and language pathology, including stuttering, the focus of this paper. Reports from practicing clinicians in two different parts of the globe, the U.S. and Poland indicate that SLPs/SLTs are encouraged to incorporate EBP when selecting the most relevant therapy interventions for their clients. The U.S. has a greater advantage of having more research data available on various types of therapy and has a longer history of formal training for their SLPs. However, as indicated in the first section, despite of various types of therapies available in the U.S., no one therapy approach in particular can be recommended as the best option for clients who may even have similar characteristics to the population that has been researched. Many of these studies lack the detail necessary about the characteristics of the subjects, inconclusive findings are reported in others, therefore, care is recommended in their implementation. Poland, on the other hand, is a relatively small country where the field of speech and language pathology is still evolving and where clinicians may not have had much exposure to the literature available due to language and economic barriers. However, in both parts of the world, clients need to be treated with methods based on documented research. And, in all instances, the clinician's judgment and clinical experience need to be accounted for. Also, the outcomes of their therapy approaches should be documented and disseminated. This is the reason for which the EBP process needs to be applied in small steps.

ASHA's Code of Ethics rule C specifies "Individuals shall engage in lifelong learning to maintain and enhance professional competence and performance" (ASHA 2010). Some lessons learned from the authors in reflecting on EBP include ongoing lifelong learning, being open to new trends, learning from our own and others' successes and mistakes, being reflective and being a client-centered therapist. Onslow states that "evidence-based treatment is an

investment for the future of profession" (2003: 243) and, we should keep in mind Quesal's statement that empathy is "[...] perhaps the most important *E* in EBP" (2010: 217).

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